THE FARM INDEX

U.S. Department of Agriculture November 1975

INSIDE OUTLOOK

OUTLOOK '76

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Outlook

The final report card for American farmers in 1975 will be even better than expected. At mid-year, economists figured net farm income in the ballpark of $20-$25 billion. The higher number now appears more likely. Though off from 1974's $27.7 billion, net farm income this year will still rank third largest in history.

Key indicators are favorable to farmers: The 1975 grain harvest will shatter all records . . . farm exports are sailing at a fast clip . . . domestically, demand for farm products is being whetted by the economic recovery.

On the average, farm prices have advanced from a year ago. Prices farmers pay to run their operations keep escalating too, but the incline is not as steep as in recent years.

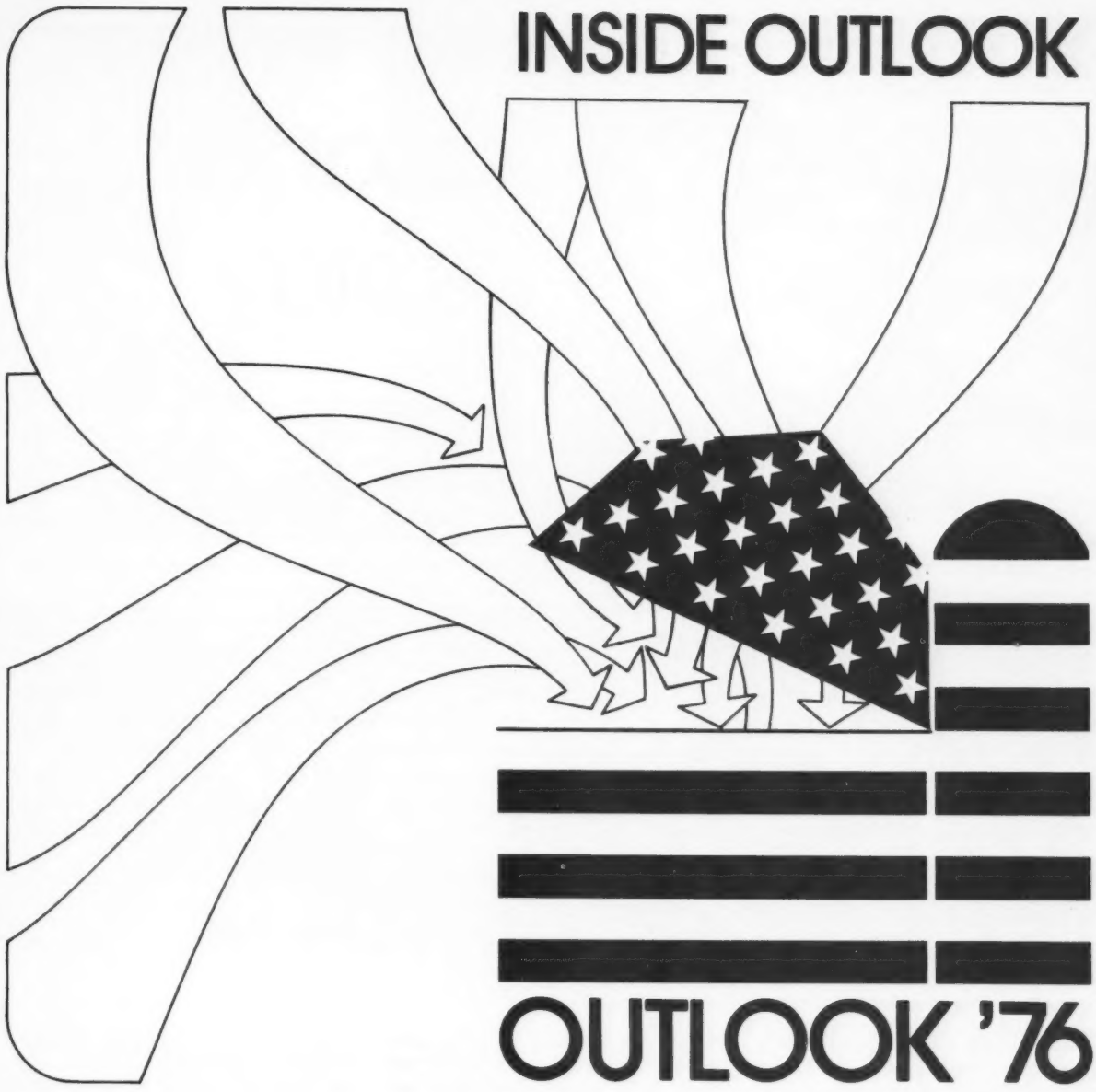
Tidings are equally good for first-half 1976 as the big 1975 harvest moves to market and livestock production picks up. Meat output this year sagged from 1974 levels, mainly due to major cutbacks in pork. But hog producers are planning to up production in 1976. Prospects for large gains in poultry output also are promising. And bigger supplies of cattle will be heading to slaughterhouses in the next 6 to 9 months.

The strong showing for livestock products in first-half 1976—combined with heavy grain marketings—should boost total farm cash receipts well above a year earlier. At the same time, the swell in grain supplies will help keep the lid on rises in production expenses for livestock men.

There should be less griping from shoppers next year about hikes in food prices. Retail prices will nose up, to be sure, but the rate of increase will slacken, based on current indicators. ERS sees retail prices advancing about 4 percent on an annual basis in first-half 1976.

This year, incidentally, wasn't as bad as 1973-74, as food prices go. Retail price increases are expected to round out to about 9 percent for all of 1975, versus jumps of around 14 percent in both 1973 and 1974. This year's price spurt is largely blamed on reduced supplies of meat since June.

INSIDE OUTLOOK



OUTLOOK '76

As the 54th National Agricultural Outlook Conference convenes in Wash., D.C., this month, our cover story answers some of the oft-asked questions about the outlook program of ERS.

Q: *The Agricultural Outlook Conferences held in Washington—they're sponsored jointly by ERS and the Extension Service, but don't other USDA agencies also participate in outlook work?*

A: Several USDA agencies get into forecasting. For example, the Foreign Agricultural Service (FAS) has primary responsibility for forecasting U.S. farm exports and imports for periods of up to a year. Short-range forecasts of the supply of crops involve ERS as well as the Statistical Reporting Service (SRS) and the Agricultural Stabilization and Conservation Service (ASCS). Livestock supply estimates and forecasts are made by SRS and ERS. ERS also does the forecasts on prices, domestic use of crops and livestock, and a number of performance measures of the agricultural economy.

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Instant Replay

Reviewers of ERS's outlook and situation reports have a few days to peruse the draft copies. But on the day of the Outlook and Situation Board meeting, that's when things really began to jump at ERS headquarters in the Nation's capital.

Minutes before the meeting starts, a proposed version of the report's summary is typed on a machine (photo 1) that electronically makes any editorial changes, and spits out corrected copies for the board.

Approving the 1-page summary is first on the agenda when the board convenes (2). The final draft gets revised, then is fed into another device (3) which instantaneously relays the summary to USDA's press room where the report is run off as a news release (4). This is the first time any of the information in the report is made public. Releases on "sensitive" commodities, moreover, are held until commodity markets close for the day.

Reporters file their stories, and the latest agricultural forecast from ERS wings its way to all parts of the U.S. and many foreign countries (5).

But another ERS responsibility is to wrap up the big package of forecast intelligence. Economists organize and interpret relevant data for a diverse clientele, ranging from farmers and agribusinessmen to Government policymakers.

Q: ***What's the time frame of USDA forecasts?***

A: They generally fall into three phases:

(1) ***Those prepared on a regular basis for the year ahead.*** These include price, production, consumption, and exports of all major farm commodities as well as of some of the minor ones. Regular forecasts are also issued on food supplies and prices, volume of farm marketings, gross income, farm production expenses, and net farm income. Finally, short-run forecasts are prepared as conditions change and on special request for supplies, prices, and the range of information relevant to the outlook for agriculture.

(2) ***Forecasts stretching beyond a year***—the number and sizes of farms, or the productive capacity of U.S. agriculture to accommodate changes in world food needs. Appraisals are also made of impacts on agriculture of changes in farm programs, foreign trade policy, energy programs, and other developments affecting agriculture.

(3) ***Long-run forecasts.*** These are often called "projections," because they examine alternative futures as far ahead as the year 2000. They are based on explicit assumptions regarding population, income growth, etc. They take into account technological, environmental, nutritional, political,

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and institutional factors that might affect the overall performance of the U.S. farm economy.

Q: *What are the tools used to make forecasts?*

A: Trained analysts supplement their judgment through use of just about every modern technique that can be brought into play; e.g., trend analysis, graphic analysis, supply and demand examination of relationships that have prevailed in the past, and other modern econometric analytical techniques.

Q: *How about the raw data; where do they come from?*

A: The wide range of data and other information used in economic outlook work comes from Government agencies, banks, newspapers, trade associations, and many other sources. Most data on domestic agriculture are collected by SRS through a corps of reporters in each State.

From the 1860's—when the SRS data collection function was set up—through the 1950's, data were gathered by mailed enumerative surveys. The trend in recent years, however, has been toward using the more scientific probability sample surveys and other statistical procedures.

Q: *Does agricultural forecasting also go back to the 1800's?*

A: Outlook work officially started later—in April 1923, to be exact—with the first Outlook Conference called by Agriculture Secretary Henry C. Wallace. Wallace and Henry C. Taylor, who then headed the Bureau of Agricultural Economics (ERS's predecessor agency), hoped that farmers, especially small farmers, would have access to basic data and forecasts as a guide to improved planning of their operations.

National Agricultural Outlook Conferences have been staged ever since, and ERS has assisted the States in regional Outlook Conferences especially since the World War II years

Around 1940, outlook information was also being published in a number of separate monthly and quarterly reports. Some of these reports are still published today by ERS—*The Livestock and Meat Situation, The Wheat Situation, The Fats and Oils Situation,* and so forth. Changes have been made over the years to combine, modify, and create some new reports to improve the flow of economic information for decision-making. The monthly *Agricultural Outlook* report, which began this past summer, is a recent innovation to combine related information and provide a more efficient and timely report on the agricultural industry.

Q: *How are ERS's outlook and situation reports assembled?*

A: They're prepared by ERS career analysts who closely monitor developments in agriculture. After an in-house review, the draft reports are submitted to "outlook boards" which provide an independent and objective review of each report. Board members are interagency representatives and include USDA's most knowledgeable career people on the report involved. The chairman schedules

meetings for each board a year in advance.

These meetings usually last an hour or so. When they're over, the summary is relayed electronically to USDA's Office of Communication for release to the press. On sensitive commodities, most board meetings are held in the afternoon and remain in session—and no one leaves the room—until the commodity markets close.

The complete report is published within 6 to 8 days.

Q: *It's been said that forecasts often lead to changes in Government programs and plans of businessmen. How do you test the validity of a forecast in such cases?*

A: In other words, you're saying an economic forecast may generate the conditions that will make it wrong. For example, a prediction of excess production and low prices for hogs or poultry might induce some producers to change their plans and breed fewer sows or cut the broiler hatch. This might result in a big forecast "error," although just how much is hard to tell.

Yet, economists would say the original forecast of excess output served its purpose well. The main objective of the situation and outlook appraisals is to provide a guide for farmers and other decisionmakers.

Q: *Be that as it may, many people think of a good forecaster as one who should be right most of the time. How accurate are ERS forecasts? A case in point—weren't the early 1974 forecasts or projections of output, use, and prices of farm products quite different from the final outcome?*

A: They were, and this raises the issue of what analysts have to go on when they make their forecasts. The chairman of ERS's Outlook and Situation Board puts it this way—

"For planning purposes we are often asked to appraise probable developments well in advance of the planting and growing season. We examine past trends and relationships, and we assume average growing conditions, no widespread disease problems, and no big surprises in overseas markets.

"Early in the 1974 growing season there was no basis for expecting the very poor growing conditions that developed later, and thus the sharply higher prices that resulted. Forecasters have no way of anticipating or measuring the future impacts of acts of God, wars, an energy crisis, export sales to countries that don't normally buy from us, trade embargoes, price controls, the closing of the Suez Canal, and so on."

Q: *But doesn't ERS attempt to monitor its forecasts?*

A: "We do," the Outlook Board chairman continues. "Despite the limitations mentioned above, it is most important to run checks on the track record.

"It's essential that analysts know the sources of error as well as the impacts of developments over which they have no control. Such tests for accuracy provide a basis for improving the data and the analytical tools for forecasting."

For example, a forthcoming study shows that ERS economists were right approximately 90 percent of the time in their first forecast (for 9 months ahead) of prices received by farmers during 1966-73. Forecasts improved in accuracy as the year wore on, with the price outlook for the final quarter off by only 3½ percent.

Q: *That's well and good for farmers. But consumers are asking, "What went wrong with retail food price forecasts in recent years?"*

A: Let's begin with 1973—a year economic forecasters would like to forget. That statement holds not just for the prophets of food prices. Forecasters in general were way off base in their predictions for the national economy. Recall that inflation galloped much faster than anticipated; consumer demand, helped by wage increases and tax rebates, shot up at an unprecedented rate; and the Vietnam conflict continued to fuel inflation.

Retail food prices increased sharply as a result—by 14½ percent instead of the 6 percent that was looked for at the start of 1973.

Agriculture had other problems. Price controls caused livestock producers to hold back on marketings. Price controls may also have stimulated consumption by holding prices below the levels needed to clear the market. And on the foreign scene, it was not possible to closely monitor grain crop developments, which proved disappointing. At the same time the Russians were making big grain purchases. U.S. farm exports zoomed, putting pressure on prices at home.

As for 1974, in February of that year ERS said retail food price increases would range between 8 and 15 percent, with 12 percent "the most likely" figure. Until the summer of 1974 and the intervention of a severe drought—worst in 30 years—it looked as though the forecast would be exactly on target.

But the dry weather and sharply lower crop output, combined with a sudden leap in sugar prices in late 1974, pushed the final retail price increase to about 14 percent, still in the projected range but above earlier expectations. The aftermath of the short 1974 crop is still being felt.

Earlier this year, ERS forecast food prices to rise 6 to 8 percent, assuming favorable weather and some slowing in export demand. However, weather at home didn't cooperate completely, and crop shortfalls in the Soviet Union and Eastern Europe sharply expanded export demand for U.S. grain. It now appears that retail food prices will advance by around 9 percent for all of 1975.

[Based on the manuscript, A Review and Appraisal of Forecasting in the Economic Research Service, by Jim L. Matthews (formerly ERS) and Richard C. Haidacher, Commodity Economics Division; also, special material from Rex Daly, Chairman, Outlook and Situation Board, and Larry V. Summers, National Economic Analysis Division.]

The Farmer's Revolution

Scrawling their names boldly on a "treasonous" document that challenged the most powerful nation on earth ir. 1776, 14 American farmers helped chart a course for a free nation.

The Declaration of Independence was drafted by a 33-year-old Virginia planter who, besides informing King George III that the colonies rejected British rule, asserted such radical ideals as "all men are created equal."

Thomas Jefferson's words have since been chiseled into stone for all free men to ponder. But while filled with soul-stirring phrases that rise from dreams of freedom, the declaration was nurtured also by a practical concern for the health of Colonial America's economic cornerstone: agriculture.

Farm-bred rebels. When Jefferson drafted the document, 9 out of 10 colonial Americans earned their livelihoods by farming. The Continental Army was commanded by Virginia planter George Washington. And most of the tough, ragged troops who weathered hardships at Valley Forge, crossed the icy Delaware River, and fought professional British troops, were farmers who had been aroused to drop their hoes and take up arms.

While time has proven the ideals of freedom that Jefferson so eloquently stated, the practical aim of many patriots has also been largely achieved: an American agricultural system unfettered from governmental oppression.

In 1776, the long tentacles of British law dipped deeply into the colonial farmers' pocketbooks and deprived them of trade opportunities with nations other than England.

Feudal shackles. The typical American farmer had migrated to the New World in search of land. Even after he had acquired the land, the farmer bitterly discovered that the shackles of the ancient British feudal system followed him across the ocean in the form of three laws: the entail, the quitrent, and primogeniture.

Quitrents were a holdover from the days when serfs paid a yearly fee in lieu of other services to the lord of the manor. Colonial farmers were expected to pay the Crown or the land company a quitrent fee. Farmers, however, normally refused to pay the full amount, if any. But they felt harassed by collectors who attempted enforcement.

The entail was a requirement instituted by the original landowner that forbade his descendants from selling the land, thus ensuring that large estates would be passed on, intact, from generation to generation.

Eldest son favored. Primogeniture complemented the entail by designating the eldest son as sole heir of the estate, excluding other children.

Thus, colonial farmers were disgruntled that their land was so regulated that they could not sell a small tract for a profit, or divide it among several children who had worked equally hard.

The farmer's irritation grew even greater with the Proclamation of 1763, after the French and Indian War. The proclamation forbade settlement of land west of the Allegheny Mountains.

To the British government, it was a sensible move to preserve peace with the Indians and to protect the vital fur trade. Yet, settlers were incensed because they were told to withdraw east of the line, abandoning land of great promise.

Speculators angered. Colonial officials were also miffed because many colonies claimed that their western boundaries extended well past the mountains. Some officials were even more upset since they were involved in speculative land development.

Several prominent Virginians owned the Ohio Company which claimed 200,000 acres on the Ohio River. George Washington was involved in such ventures.

While rivalry between the land companies was intense, they found one point of agreement: the proclamation hurt their business.

A new round of treaties with Indians in 1768 moved the line to the west, but the line never shifted fast enough to keep ahead of settlers.

Quebec Act. Perhaps the most galling incident occurred in 1774, when Britain tried to do a humane deed: the Quebec Act. The law set up a civil government for Quebec, granted religious freedom for French Catholics, ordered French law administered, and extended Quebec's boundaries to the Mississippi and Ohio Rivers.

Settlers, colonial officials, and land speculators were enraged by this loss of western lands.

Even without additional provocations, the farmer had plenty of cause to feel rebellious. Hopes of additional land were crushed by an imaginary line, and land that he owned was tied up in legal red tape.

Yet, trade provocations were even more severe than those over land, from an economic viewpoint. The British smugly set up trade restraints that favored citizens of England at colonial expense.

Two types of restraints. These restrictions came in two basic forms: curtailment of trade with non-British markets, and taxation of exported goods.

The Corn Law of 1689 imposed stiff duties on goods shipped to England—the only market allowed. The Molasses Act of 1733 and the Sugar Act of 1764 taxed molasses and sugar that didn't originate in the British West Indies, thus curtailing trade between New England and the foreign West Indies.

New Englanders did far more than grumble. They set up a brisk smuggling trade with forbidden clients.

Other restrictions hampered the export of cattle to the West Indies, but western settlers, who produced most cattle, considered it only as a minor irritant. They were more enraged by the tendency of British colonial governments to ignore their needs and wishes, and by their lack of representation in government.

Southern problems. Southern planters were vitally affected by trade restraints. In 1621, Britain required that all tobacco must be shipped to England, where it was heavily taxed. To add to their woes, planters faced steadily decreasing yields as soil became depleted.

Taxes were also levied on rice exports. Rice, like tobacco and some other commodities, was allowed to be shipped only through England, where it, too, incurred taxes before being re-exported. A 1730 law modified this to allow direct shipments to foreign ports with payment of half the regular duty.

Indigo, the third plantation staple, received more favorable import status. England, the only market allowed, subsidized prices for exported indigo. Many grateful Georgia and South Carolina indigo planters remained loyal during the war.

Farmers lead revolt. With trade and land grievances in mind, it's little wonder that much of the Revolution's leadership came from farms and plantations.

Of the 56 Declaration of Independence signers, 14 were farmers: Jefferson, Carter Braxton, Benjamin Harrison, Richard Henry Lee, Francis Lightfoot Lee, and Thomas Nelson of Virginia; Charles Carroll and Thomas Stone of Maryland; Abraham Clark and John Hart of New Jersey; Thomas Lynch and Arthur Middleton of South Carolina; William Floyd of New York; and Button Gwinnett of Georgia.

During the Revolution, as many farmers joined the army, others still tilled the soil. The war was an economic windfall for many farmers who supplied British, French, and patriot armies. Most farmers sympathized with the patriots, but British business was welcomed by some, especially Mennonite and Quaker farmers who opposed the concept of war and remained neutral.

Fiber industry grew. As a side benefit, the war gave farmers incentive to establish a fiber industry, since imports of British cloth were curtailed. Sheep, flax, and hemp became farm fixtures.

Bountiful crops continued to come in. Although the patriot army experienced severe food shortages sometimes, the problem was in buying and distributing food, not growing it.

Perhaps the worst food shortage occurred at Valley Forge during the winter of 1776-77, when Washington's army shivered and starved through bitter storms. The army was finally saved when several governors responded to Washington's appeals for provisions.

Time out for farming. Washington's army of farmers fought heroically in battle, but their main occupation, farming, often created a problem for generals. During planting and harvesting times, they strayed away to tend their fields, to Washington's great anguish.

Fortunately, harvest was over just in time for the climactic Battle of Yorktown, Oct. 19, 1781, when enough farmers turned out to win the

(Continued on next page.)

White House Farmers

The American Presidency is rooted firmly in agriculture through the farm ties of 22 Presidents.

The farm influence was naturally greater in the early years of the Nation when most Americans and most American Presidents were raised on farms.

The first farmer-President was George Washington, who was raised on a plantation in Virginia.

While Washington's fame is derived from his accomplishments as a soldier and statesman, historians generally agree that his first love was the development of his Mount Vernon plantation. Over the years, he made Mount Vernon a veritable agricultural experiment station. He kept records of different wheat varieties, became America's first mule breeder, and compiled America's first crop reports based on survey information.

John Adams, the second President, was the son of a Puritan farmer. His son, John Quincy Adams, was the sixth President.

Thomas Jefferson, son of a Virginia planter, established a successful, innovative plantation at Monticello. A great spokesman for agrarian ideals, Jefferson invented a side-hill plow and devised a moldboard that theoretically would turn the plowed earth. He improved other machines and introduced rice from Italy.

James Madison was a member of the clique of Virginia planters that dominated early American politics. The son of a planter, Madison maintained a plantation at Montpelier, Va.

Still another Virginia planter, James Monroe, operated the plantation Ash Lawn in Charlottesville, Va., near Monticello. His father was also a planter.

Andrew Jackson, son of a South Carolina frontier farmer, later established the plantation, the Hermitage, near Nashville, Tenn.

Martin Van Buren's father was a truck farmer and innkeeper in Kinderhook, N.Y.

William Henry Harrison was the son of a Virginia planter. He also operated a plantation. His son, Benjamin Harrison, became the 23rd U.S. President.

James Knox Polk, the 11th President, was the offspring of a farmer in Duck River, Tenn.

Zachary Taylor was the son of an Orange County, Va., farmer who moved to Kentucky when Taylor was a year old. Taylor became a planter.

Millard Fillmore was the son of a frontier farmer in Cayuga County, N.Y.

James Buchanan was the son of a merchant-farmer in Cove Gap, Pa.

Abraham Lincoln was born and raised on a frontier farm in Kentucky, and moved with his family to farms in Indiana and Illinois. As President, he strongly supported the agricultural reform of 1862 which resulted in the Homestead Act that opened great areas of farmland, the Railroad Act that established the Union Pacific Railroad, and legislation that provided Land Grant colleges and established the U.S. Department of Agriculture.

Ulysses S. Grant was the eldest son of a Point Pleasant, Ohio, farmer.

James A. Garfield was the son of an Orange, Ohio, farmer.

Theodore Roosevelt operated ranches in the Dakota Territory.

Calvin Coolidge's dad had a farm in Plymouth Notch, Vt.

Herbert Hoover, the first President born west of the Mississippi River, was the son of a West Branch, Iowa, farmer-blacksmith.

Harry S. Truman, the oldest son of a Lamar, Mo., farmer and livestock dealer, grew up on a farm near Independence.

Lyndon Baines Johnson was born on a farm in Stonewall, Tex., and later operated a sprawling ranch.

Surprisingly, only four Vice Presidents who did not attain the Presidency had farm ties: John C. Calhoun, John Garner, Henry A. Wallace, and Hannibal Hamlin.

(Based on special material by Wayne D. Rasmussen and Vivian Whitehead, National Economic Analysis Division.)

(Continued from page 8.)

final major victory, with the aid of French allies.

After the war, British laws such as entails, quitrents, and primogeniture were voided by the victorious farmers. Imaginary barriers to western settlement were erased, and free trade with other nations was allowed.

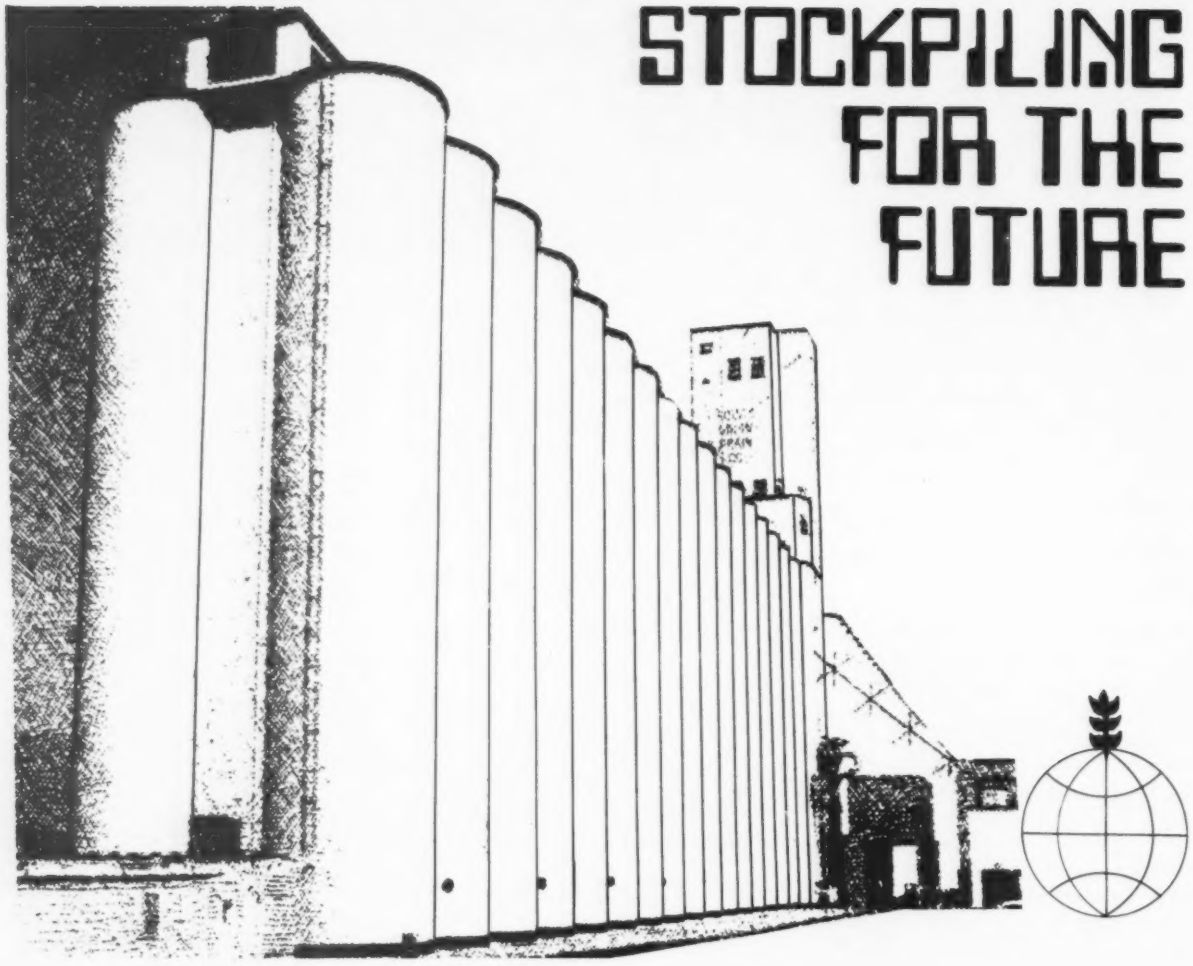
Free trade became such a vital principle that when British warships persisted in harassing Yankee traders, the war of 1812 resulted.

Westward surge. As for the westward expansion, Virginia planter Jefferson bought the huge Louisiana Purchase area from France during his presidency for a mere $15 million.

The great bargain assured the American farmer of vast fields of land stretching to the Rocky Mountains and including America's great Midwestern heartland.

[Based on material provided by Wayne D. Rasmussen, National Economic Analysis Division.]

STOCKPILING FOR THE FUTURE



America's grain reserves have traditionally been a lifesaver to countries ravaged by drought, not to mention the security blanket they've been to long-time commercial buyers of U.S. products.

In the 1950's and 1960's, Government programs designed to raise farm income resulted in the stockpiling of food and feed grain supplies. Now, however, the bins are nearly empty.

Bad weather in 1972, especially in the Soviet Union, coupled with a disappointing U.S. crop 2 years later, were the main reasons for the diminishing reserves.

With foreign supplies down, world import demand for food accelerated, boosting U.S. exports to record levels over the last 3 years. As a result, by the summer of 1975, U.S. grain stocks had ebbed to the lowest level in 22 years.

Tight situation. This fall, despite record U.S. crops and the prospects for some replenishment of U.S. stocks, the worldwide reserve situation remains precarious due to large shortfalls in Soviet grain production, which has required the Russians to enter the world market for grain supplies. This continued tight grain situation means continued high prices and continued calls from humanitarian and commercial interests to stabilize the situation.

ERS researchers have been studying the pros and cons of various reserve policies. They say the objectives of a grain reserve policy are to reduce the danger of food shortages at home and abroad, stabilize consumer prices, and stabilize and increase farm income.

How to achieve objectives. Methods of achieving these objectives include gathering reserve stocks, adjustments in grain production, livestock feeding, and international trade in livestock products, and export and import controls, including long-term trade agreements.

Reserve policies generally fall into three classifications. These include:

- Unilateral—all decisions on reserve stocks are made by one country.

The big plus of a unilateral policy is that it can be put into effect immediately; it doesn't depend on negotiations or cumbersome agreements. On the other hand, unilateral decisions have the disadvantage of placing the country making the decisions in a position of forcing other nations to accept a course of action which might be undesirable to them.

Uneconomical policies. For example, in a very tight world grain situation, U.S. grain supplies might need to be protected by export controls or other means to prevent skyrocketing prices at home. The fear that some countries might not be able to obtain the supplies they need may lead them to pursue uneconomical production policies in an effort to attain self-sufficiency in food. Countries may even erect or increase trade barriers to stimulate domestic agricultural production. Countries may also find it necessary to establish their own stockholding policies, which they may not be able to afford.

- Bilateral—two countries make all reserve stock decisions. This type of system could expand benefits to the U.S. and its negotiating partner and reduce some of the uncertainty and costs of a go-it-alone policy. Negotiations with other foreign countries could lead to agreements on the amounts, prices, and timing of export sales; stockpiling by the importing country; financing stocks in the U.S.; and the exchange of information and forecasts on production, consumption, and stock levels.

Less Risky. These actions would lessen the risk and uncertainty of maintaining a reserve system and reduce the need for large reserves to be held in the U.S.

On the whole, bilateral agreements will be most advantageous if they can be made with countries that tend to destabilize world grain markets.

- Multilateral—three or more countries make all grain reserve decisions. (The International Wheat Agreement is an example.) Although multilateral agreements are more difficult to reach and administer, they would probably enlarge the area of benefits to the U.S. and the world.

Proposal from the U.S.

Countries that rely on the U.S. for grain in years of shortfalls may soon be building their own stocks, if a U.S. proposal for an international grain reserve system is adopted.

The plan, which was presented at a September meeting of the International Wheat Council in London, recommends that a reserve of 30 million tons of wheat and rice be set up and held as protection against future grain shortages and famine. Individual countries would hold and maintain reserves.

Any government represented at the 1974 World Food Conference, or any member of the International Wheat Agreement, would be eligible to participate.

Countries would agree to certain guidelines concerning the buildup and withdrawal of stocks.

The agreement would last for 5 years, unless a majority of the exporting and importing participants (two separate votes) wanted to dissolve the agreement. In that case, the agreement would be void 12 months after the vote was taken.

If a government decided to withdraw from the agreement, it would still have to meet its reserve commitments for the current crop year, as well as the next.

Developed countries would help developing countries meet their reserve obligations. This could take place in the form of financial or food aid, or, in the case of developing countries with small reserve obligations, their share could be taken over entirely by the wealthier countries.

Each member would decide how to maintain its reserves and how to provide for their buildup, holding, and withdrawal.

To accomplish its objectives, the system would require an exchange of information on crop prospects, supply availabilities and stock, anticipated demand, and international trade in grain. Such information would be collected on a timely basis.

FAO proposal. The problem of grain reserves and unstable markets affects everyone, not just the U.S. Many countries depend on world markets for their food supplies, and in some cases international trade means survival. Since the world has become so interdependent, there have been a large number of multilateral approaches proposed as a means of solving the problem on unstable grain markets. One of these is the Food and Agriculture Organization's (FAO) international undertaking on world food security.

Although no single analytical system has been developed to weigh and evaluate all aspects of food reserve systems simultaneously, some separate analyses have been made on important aspects of the problem.

A reserve analysis. One, based on the short-term price effect, indicates that when stock levels are high, prices remain stable. When levels are low, prices become quite sensitive. For example, when stock levels of wheat are down, the price response increases as supplies tighten. For each change in supplies of 1 million metric tons, the price of wheat could change by $10 per ton. For corn, the price response of $4 per ton is less because adjustments in the livestock sector dampen demand.

Given the uncertainties of weather and political decisions, it will be difficult to establish a perfect grain reserve policy. Thus, a flexible policy framework may be needed so that appropriate revisions in policy can be undertaken.

[Based on the manuscripts, The Economics of Possible Food Reserve Systems and Their Relation to Commercial Markets by Anthony S. Rojko, and Discussion of Alternative Grain Reserve Policies by W. Scott Steele, Foreign Demand and Competition Division.]

Farming for World Markets

American farmers got into the export business more than a century and a half before the Declaration of Independence.

It started back in 1613 when colonists shipped 2,500 pounds of tobacco from Jamestown, Va., to England. Three centuries later, farm products still made up the bulk of our exports. And in the 1970's, foreign sales are more important than ever before.

This trade has helped shape the economic landscape both here and abroad. Throughout our national history, farm exports paid for most of our imports. They provided the capital needed to support industrial development and they paid for amenities that made life more pleasant in a young Nation.

Industrial revolution. American cotton and other agricultural raw materials helped fuel the industrial revolution in Great Britain in the 19th century. Today, U.S. feed grains are making it possible for Japan and other nations to build livestock industries that are upgrading their diets.

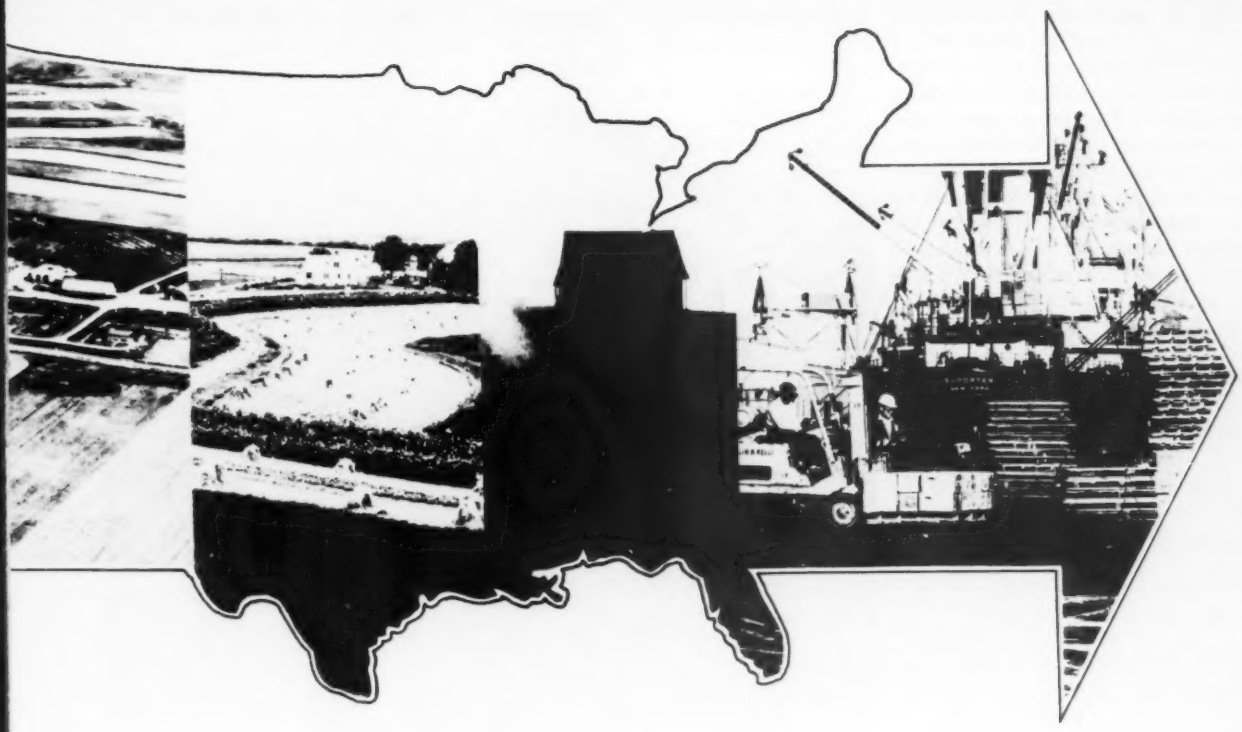
The food-short nations of the world have regularly turned to the American farmer when crop failures, the disruptions of war, or natural calamities threatened famine. American-produced foods helped tide Europe over the food shortages of 1790-1807 caused by the Napoleonic wars and poor crops. In the 20th century, American food aid reached gigantic proportions after each of the two great world wars. And in the last 20 years food assistance programs have played a vital part in the economic growth of the developing nations.

Shifting demands. All of this has had a decided impact down on the American farm. The shifting demands of world markets have helped determine the kinds of products our farmers produce, the prices they receive, their incomes, and thus their standard of living.

Foreign demand for American farm products during the past 200 years has undergone major changes —shifting to food and feed from raw materials such as cotton, tobacco, hides and skins, which historically made up the bulk of agricultural exports.

In colonial days, tobacco accounted for 36 percent of the agricultural exports, which made up 75 percent of all exports. Tobacco was grown primarily in Virginia, the Carolinas, and Maryland. Rice and indigo, from South Carolina, accounted for another fifth of the agricultural exports of the original colonies.

European competition. After the Revolution, American tobacco, indigo, and naval stores no longer had a monopoly of the British market and had to compete in other European markets. As a result, exports of tobacco and indigo declined while exports of foodstuffs increased. New York, New Jersey, and Pennsylvania—the "bread basket States" of those days —and New England, where considerable quantities of beef, pork and live



animals were produced, became the leading export States.

With European economic recovery after the Napoleonic wars, American cotton exports rose rapidly to become the leading export commodity—a position it held until 1945, when wheat shipments took over.

Cotton exports. Great Britain was our most important cotton customer from 1815 to 1860, although quantities were also shipped to other European markets. The value of cotton exports rose from about $18 million to $192 million by 1860. In that year cotton accounted for three-fourths of agricultural exports and three-fifths of total merchandise exports.

Farm exports had a lot to do with the Civil War. Many Americans in 1861 believed that the outcome of the war might depend upon England's demand for cotton. It was thought that England would recognize the Confederacy to obtain cotton, thus improving the South's chances of winning the war. But England was also interested in American wheat as a result of crop failures there and in most of Europe. Consequently, American wheat exports rose from 4 million bushels in 1860 to an average of 35 million bushels during 1861-63.

Vast new lands. As railroads pushed across the prairies and into the Great Plains after the Civil War, new lands were opened for commercial wheat production. Large-scale, mechanized wheat farming developed in the Red River Valley in the 1870's and then spread westward. Today 80 percent of the wheat is produced in 10 States west of the Mississippi River.

In 1886, the Nation grew 170 million bushels of wheat; in 1890, 655 million bushels; in 1974, 1,793 million bushels. Sixteen million bushels were exported in 1866, 102 million in 1900, and 956 million in 1974.

Tobacco, the colonial king of American commerce, had lost its place as a leading export by 1800, although the shipments abroad continued to increase slowly and irregularly. But growth in the post-World War II years has been slow.

Industrial demands. Increasing industrialization in Europe as well as in the U.S. marked the period from the Civil War to the end of the century. The result was a greater demand for farm products, since factory workers needed food and mills needed cotton. The farmers of America could supply both.

There was also an American agricultural revolution that centered around the Civil War. This first of agriculture's revolutions saw passage of the Homestead Act, the establishment of the Department of Agriculture and the Land Grant Colleges,

and the increasing mechanization of agriculture, marked particularly by the substitution of animal power for manpower. These and related developments led to greatly increased production at lower unit costs. The costs of mechanization and of adopting improved methods made the farmers more dependent upon markets.

Foreign markets. At the same time, foreign markets were taking an increasing share of our farm production, especially cotton, tobacco, wheat, and meat products. From 1869 to 1900, the home market absorbed about 82 percent (by value) of farm products sold and the foreign market about 18 percent. Currently, foreign markets take about a fourth of all U.S. farm products produced, including over 50 percent of our wheat, rice, and soybeans.

U.S. farm leaders from the beginning recognized the importance of the export market. Studies of area markets for particular crops were made early in USDA's history. These led to establishment of a Section of Foreign Markets, the forerunner of today's Foreign Agricultural Service.

Fuel industrial growth. Agricultural exports, which accounted for three-

Overseas market development has a long history. Here, Americans drum up business at the 1889 Paris Exposition.

Cotton, the fifth-ranked U.S. agricultural export commodity, has been a major foreign market item for nearly 2 centuries. This wagon load was picked in 1939 in Mississippi.

fourths of all exports between the Civil War and 1900, helped supply the capital needed for the rapid growth of industry. Even though they now make up a much smaller share of total exports, they help to offset rising costs of oil imports and to improve our trade and payments balances, thus, indirectly strengthening the national economy.

U.S. exports declined between 1900 and World War I, as a result of increasing nationalism in Europe, increasing competition from other nations, and a better balance between consumption and production in the U.S. But the picture changed dramatically with the outbreak of the first World War.

A billion bushels. England and France began to buy food grains and arrange for credit. Exports of wheat jumped from 92 million bushels in 1914 to 260 million bushels the following year. The 1915 crop was the Nation's first of over a billion bushels.

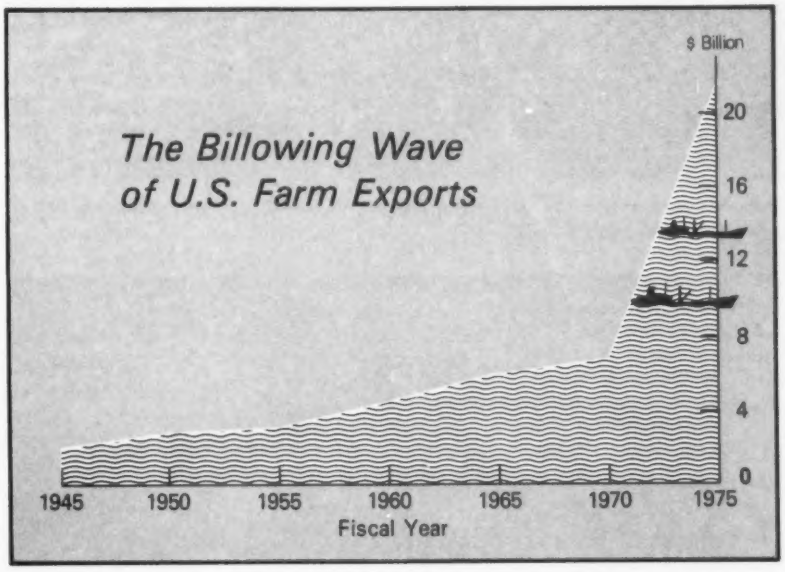
During the next 2 years both production and exports of wheat declined greatly because of bad weather and a shift in European demand to meat products.

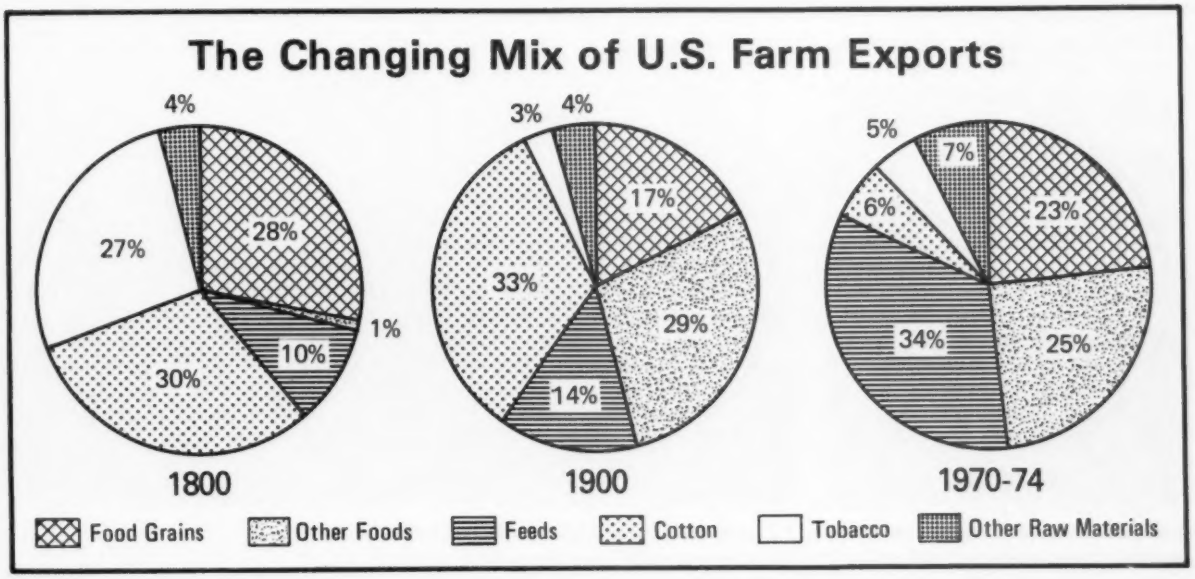
Exports of meat and meat products soared from $132 million in 1915 to $698 million in 1919. Wheat exports did not reach the 1915 level until 1921.

Cotton also felt the impact of wartime changes in demand. The 1914 crop was 16 million bales, the largest on record at that time, but exports fell over a fourth and prices declined sharply. Prices began to improve in 1917, and by 1919 they had improved sufficiently to make this year remembered as the year of the $2 billion cotton crop.

Peace slump. Peace brought a slump in foreign demand. The volume of agricultural exports fluctuated about one-fifth below the wartime peak of 1918-19 from 1921 through 1929, when the onset of the Depression caused a further severe decline.

By 1934-35, volume was nearly 60 percent below the 1918 level. There-





American Agriculture Helps Underdeveloped Nations Grow

Human needs, which are ultimate targets of U.S. aid projects, are exemplified by these children in Nepal.

This 100,000-ton wheat shipment being loaded in a U.S. port will ease starvation in a developing nation.

A wooden plow in Morocco shows lagging agricultural technology.

Children in a drought-stricken African nation depend on U.S. food supplies for survival until local crops improve.

An Israeli farmer picks cotton grown with U.S. technical advice.

after, it increased slightly until World War II. The annual value of exports was around $2 billion from 1924 until the Depression, and then fell to about three-quarters of a billion annually until World War II began.

Product mix. Changes in foreign demand for U.S. agricultural products in recent years have altered the product mix of our exports that had existed for over 150 years. It featured a sharp drop in exports of agricultural raw materials for industrial use and a dramatic rise in feeds and feed grains. Food exports have fluctuated over our 200-year history.

Turkish farmers enjoyed a good peanut harvest in the mid-1960's, thanks to tips on fertilizer use from U.S. experts.

In 1925-40, cotton and tobacco accounted for 55 to 60 percent of our farm exports, while feed grains and soybeans made up less than 5 percent. By 1970-74, cotton and tobacco's share had fallen to about 11 percent and that of feed grains and soybeans had increased to about a third. During this time, exports of food grains (wheat, flour, and rice) increased from about 10 to 23 percent of the total.

Raw materials. In the 1920's and 1930's, about 60 percent of U.S. farm exports were agricultural raw materials. During World War II, however, food exports increased to 77 percent while the proportion of raw material items declined to 20 percent.

Since the war, the proportion of food exports has declined but has remained substantial, averaging 48 percent in 1970-74 or about the level of 1900. The proportion of raw materials has eased down to 18 percent.

Future changes in world demand should continue the trend toward an increase in the export share of feed relative to food products.

Foreign economic growth. The changed composition of U.S. farm exports reflects the impact of sustained economic growth in Japan and Western Europe the last 2 decades. Consumption has become more diversified and specialization of production has increased, affecting the level and commodity composition of trade between most countries. The ability of the countries to meet their rapidly growing demands for food and feed has varied greatly by country, depending upon the supply of agricultural land and other resources.

Japan imports feed. For example, Japan, with its limited supply of agricultural land, has relied heavily upon imports of feed products, especially from the U.S. Western Europe, on the other hand, has much more land resources for agricultural production. These countries are able to produce a large proportion of their total feed consumption. However, some other countries may be approaching the limits of their land resources, and will be forced to turn increasingly to the American farmer

Italians view U.S. farm products at trade fair in Milan.

for more of their food and fiber needs.

Agriculture's most dramatic contributions to our economic growth were in the earlier stages of our development. However, farmers will continue to provide a firm underpinning to our economic growth and well-being.

Dynamic contributions. In the years ahead, American agriculture will almost certainly continue to make dynamic contributions to world economic growth. This is not a new role.

During the first half of the 19th century, the combination of Eli Whitney's cotton gin and the cultivation of new lands in the South provided Britain's rapidly expanding textile industry with abundant supplies of cheap cotton. During this period these exports made a key contribution to the industrial takeoff in Great Britain, which centered on the direct and indirect consequences of the rapid expansion of cotton textiles.

Aid developing nations. American agriculture will continue to help foster economic growth in the more developed countries. But the most dramatic contributions are likely to be to the underdeveloped countries, whose populations account for about 3 billion persons out of a world total of some 4 billion.

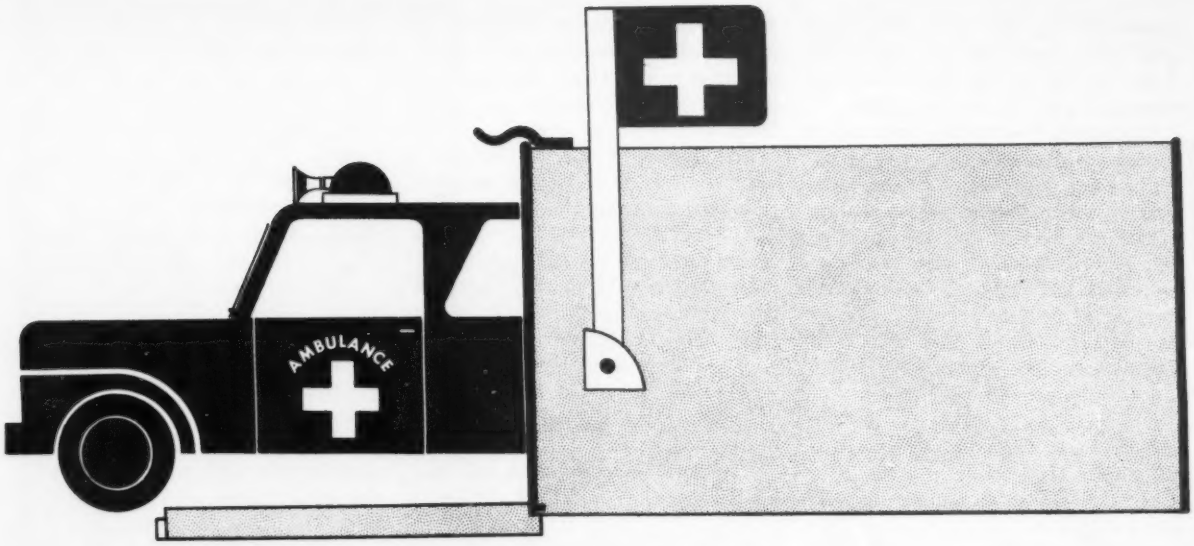
Rising levels of output and income in the poorer countries, from whatever source, generally increase the demand for the products of the more developed countries.

The ensuing trade will influence the pace of economic development in both groups of countries. The U.S., along with other advanced industrial countries, has an important stake in both world economic development and the expansion of international trade in agricultural products.

[Based on special material by Arthur B. Mackie, Foreign Demand and Competition Division.]

The growing Japanese dairy industry, stocked with U.S. breeding cattle, is a swelling market for U.S. feed grains.

An ocean voyage awaits these American cattle as they are driven aboard a transport ship. Farm exports shore up the U.S. balance of trade and strengthen the dollar against inflation.



Rural Ambulance Service Fights For Its Life

City people take their ambulance service for granted. An urbanite suffering a heart attack or stroke can be rushed to the nearest hospital within minutes. But what happens if the victim lives in the country, 30 miles or more from the nearest doctor? His chances of getting prompt medical attention are greatly reduced.

The situation wasn't always so bad. Funeral homes and fire and police departments traditionally provided ambulance service to rural people. But rising labor and equipment costs over the past few years, as well as the often long distances involved, have forced many of them to discontinue the vital service.

ERS procedure. Many rural counties are considering furnishing emergency medical services (EMS) themselves, but it is hard to make good choices without solid facts. To help, ERS developed a procedure for local leaders to analyze alternative ambulance services in their own community.

The method involves estimating receipts for EMS and expenses for four different EMS systems. By comparing the two, community leaders can easily see which systems they can afford.

Eight western Oklahoma counties were selected for the study, mainly because most of their residents are employed in agriculture and the land is sparsely populated—conditions typical of the Great Plains.

Discontinued service. There were 221 funeral home ambulance operators in Oklahoma in 1969. By 1973 the number had dropped to 124. In the study area alone, 5 of the 19 private ambulance operators in business in 1973 have discontinued EMS service.

Considerable data were provided by the 22 public and private ambulance operators in the study area for 1973, especially their estimates of the number of annual ambulance calls and the receipts.

The first step in evaluating EMS systems is to estimate receipts for ambulance service. This is done by analyzing such patient flow data as the number of highway accidents requiring EMS in a year, the number of interhospital patient transfers, and the number of all other medical calls, such as heart attacks, strokes, and work accidents, for each age group of an area's population.

Eight counties. For the study, receipt data were based on the eight participating counties. However, the procedure was designed in such a way as to be applicable to other areas in the Great Plains, and elsewhere, facing similar problems.

To estimate the number of highway accidents in a year, the analysts used the average for the preceding 2 years. They say it is impossible to use a standard method for predicting patient transfers between hos-

pitals for a given area. They suggest that transfers be estimated from records of previous ambulance operators and the local hospitals.

Calculating other medical calls. Other medical calls can be projected by using the age distribution of the population. For instance, persons using ambulance service can be classified into eight categories, such as 19 and under, 20-29, 30-39, and so on. The number of persons in each category can be found in the U.S. Census of Population. The number of ambulance calls per year for each age group in a given area can be obtained from the records of local ambulance operators.

Using the data on ambulance calls and population, utilization rates (the number of ambulance calls per 1,000 population per year) can be determined for each age group, thus enabling a prediction of the number of medical calls, other than highway accidents and patient transfers, in a year.

Receipts estimate. Given the average number of highway accidents, an estimate of patient transfers between hospitals, and the age of the population, the total number of ambulance calls per year can be estimated. These data, multiplied by the selected fee for EMS, average mileage estimates, and percentage of patients expected to pay their bills, result in an estimate of receipts for ambulance service in an area.

Cost factors. Costs depend on a number of factors. Capital expenditures include the vehicle itself, which costs from $8,000 to $14,000, and the communications system, which has a price tag of $300 to nearly $6,000. Operating expenses are costs of gasoline, tires, tuneups, etc.; medical supplies, particularly linens, which average about $1 per call; labor; vehicle storage, and vehicle and malpractice insurance.

Expenses are computed for four EMS systems: (1) fully-staffed with a minimum of four technicians; (2) police or fire department-based, with city personnel making calls from 8 a.m. to 5 p.m., and with volunteers making calls from 5 p.m. to 8 a.m. at a rate of $5 per call or 10 cents per mile, whichever is greater; (3) police or fire department-based, with city personnel making calls from 8 a.m. to 5 p.m., and volunteers making other calls at $5 a night; and (4) hospital-based with two technicians.

Choosing the right system. By comparing receipts and expenses, community leaders can determine which EMS system they can afford.

To demonstrate, the procedures were applied to Alfalfa County, Okla., which in 1970 had a population of a little more than 7,000.

In this county, total ambulance calls were predicted to be about 335 during 1974. With certain assumptions about fees and mileages, and a collection rate of 100 percent, estimated receipts were nearly $20,000. At the more realistic collection rate of 70 percent, receipts were about $14,000.

Average expenses for the four EMS systems were $34,000, fully staffed; $14,000, police or fire department with volunteers paid both on a call basis and a low, flat rate; and $21,000, hospital EMS, minimum staff.

Examining the facts. Therefore, community leaders in Alfalfa County could assume that with a 100-percent collection rate (approximately $20,000 receipts), they would have to subsidize a hospital-based system with about $1,000. To provide a fully-staffed EMS system, costing more than $34,000, they would need an annual subsidy of more than $14,000.

Using the more realistic collection rate of 70 percent (nearly $14,000 receipts), it becomes obvious that only the EMS systems utilizing modestly-paid volunteers could be provided without a substantial subsidy.

Training program. Community or county leaders who face the problem of providing ambulance service for their area should be aware of national training programs and regulations for EMS technicians. Training is provided by the U.S. Department of Transportation and the Red Cross. National regulations of importance are the Emergency Medical Services Act of 1973 and the Highway Safety Act of 1966.

Many rural communities lack ambulance service, thanks to high costs.

[Based on the manuscript, "The Economics of Rural Ambulance Service Under Great Plains Conditions," by Gerald A. Doeksen, Oklahoma State University, and Bernal L. Green, University of Arkansas, Economic Development Division, and Jack Frye, Oklahoma Extension Service.]

The American addiction for natural cheese has become so acute in the past 15 years that the Nation's cheesemakers have virtually doubled production to meet demand.

Sprinkled on pizzas, plopped on hamburgers, spread on crackers, poured over salads, mixed with noodles, or even sliced onto hot apple pie, more than 2.9 billion pounds of natural cheese were produced in the U.S. in 1974.

Behind this production surge is a complex industry that has undergone steady changes in recent years to meet consumer demands.

A recent ERS study that surveyed 225 cheese plants producing 60 percent of all natural cheese examined both the organization and the technology of this industry.

New developments. The survey found that things are happening at virtually every stage of natural cheese production and distribution that have economic and technological effects on the product.

Some of the more significant trends in the natural cheese industry are:

- Natural cheese production jumped four-fifths from 1960 to 1973, while the number of cheese plants declined from 1,419 to 865, and average production per plant tripled to 3.1 million pounds.
- Italian-type cheeses, perhaps spurred by pizza popularity, enjoyed a huge production increase. They now account for more than a fifth of natural cheese production.
- Almost half of the 96-percent jump from 1960 to 1974 came since 1971.
- Production of process cheese rose 53 percent from 1960 to 1973.
- Cheese production appears to be decentralizing after years of domination by the North Central region.
- More automation is occurring particularly in large cheese plants.
- Whey, the byproduct of natural cheesemaking, is less likely to be dumped as waste, and more likely to be processed for human and animal food.

From these highlights, it is ap-

parent that changes are occurring at each stage. These changes are evident in an examination of the production-distribution system.

The first step is the acquisition of raw milk.

Milk used in natural cheese manufacturing usually moves a short distance, while milk used for fluid purposes is sometimes shipped hundreds of miles. Plants are also increasing their milk supply source area as the number of cheesemakers declines.

Competition for milk. Cheese plants compete for milk supplies by offering milk producers such incentives as premiums, insurance plans, and subsidized hauling. The "good will" of the milk supplier is vital to a plant because a steady supply is needed.

Bulk milk producers directly furnish over half the milk supply, and producer cooperatives provide 18 percent.

Once the milk is collected, the plant's storage capacity is a vital concern, since part of the milk must often be stored over weekends and holidays. It also determines how long a plant can function without a new shipment. The average plant can store 20,000 gallons, or enough for 1½ to 3 days' production, depending on plant size.

When actual production starts, the degree of automation varies with plant size and cheese type.

Add bacteria cultures. Most cheeses are made from whole milk. Bacterial cultures are added to increase acidity, and rennet or microbial enzymes coagulate milk.

The coagulated milk is then cut, stirred and heated, whey is drained, and the curd is collected or pressed.

At this point, techniques vary among different cheeses. The variations are in bacteria or mold used, milk composition, temperature, humidity, whey expulsion method, technique of cutting and forming curd, method of pressing, and color added.

In making cheddar, the most popular American cheese, the curd is cut into small cubes, heated, whey is drained, the curd is matted and turned, and the cheese is cut, salted, packed, and pressed into final form.

Cheddar automation. Automation in cheddar cheese production has encouraged larger plant operations. The old system of cooking and cheddaring in the same vat has been replaced by a method of pumping whey and curd to a smaller drain table. Cheddaring, milling, salting, weighing, and molding are now automated processes in some large plants.

Automation has come more slowly in Italian-type cheese production. The cheese requires higher temperatures than cheddar, and the curd is formed and stretched in hot water, placed in hoops in cold water, and immersed in salt brine.

Relatively more changes have been made in mozzarella production. Mozzarella, a key pizza ingredient, is the most popular Italian cheese. Manufacturers now often use larger vats, direct salting of the curd, and automatic mix-molders.

From kettles to vats. Swiss cheesemaking has moved from kettles to vats, and from wheel-molding to labor-saving, quicker-aging 100- or 200-pound rindless blocks.

Spurred by production booms, many plants have modernized facilities. Of the 225 plants surveyed, 55 percent had remodeled, expanded, or undergone major improvements from 1971-73.

Despite these advances, the disposal of the whey byproduct remains a major problem. Traditionally, since it had little value, whey was dumped in a sewer or stream, or given to farmers for use as a livestock feed or a fertilizer.

In recent years, strict pollution standards discouraged dumping of whey, and less whey is given to farmers because of a shift to bulk milk pickup and the high cost of operating a return route. Also, because of farming developments, fewer farmers want the whey.

Whey useful. In recent years, higher prices for nonfat dry milk and protein commodities improved demand for whey as an ingredient in ice cream, process cheese items, baking, candy, meat processing, and other foods.

Once the cheese is made, it must be prepared for distribution. It may be packaged for sale as natural cheese, made into process cheese products, or put into convenience foods such as cheese crackers, or into institutional foods, such as pizzas.

Steps eliminated. The distributor assembles small, diverse lots of cheese from the manufacturers, and sorts and aggregates them into larger lots. The assembling function may be performed by large cheese processors who get much of the cheese from their own plants. This increased integration within the production-distribution system eliminates some steps of handling.

At this stage, some cheese must be stored for aging. This is often done at the plant, where average storage capacity is 354,300 pounds.

After storage, the cheese is moved to the first handler, usually by truck. Average distance of this move is 318 miles. Thus, rising transportation costs affect the industry.

Cheese distribution. Retailers then distribute the cheese, which has been cut and packaged into retail units. The cheese is cut into either exact or "random" weights, packaged, and branded with either the distributor's label or the retailer's private label.

Before the cheese reaches the consumer, Government regulations, policies, and standards are imposed to protect both the industry and the consumer.

USDA and other Government milk regulations insure uniform milk quality to the cheese industry.

Government inspection. To protect consumers, USDA inspects all cheese, dry milk, and butter plants that sell to the Government at least twice yearly. Imported cheese must meet domestic standards, and it is checked by the Food and Drug Administration.

Thus, when cheese reaches the consumer, cheese lovers can consume it knowing that they are getting the quality they demand. And, with full confidence in the product, they can pour it, slice it, sprinkle it, or gnaw it to their hearts' content.

[Based on *The Cheese Industry*, by Harold W. Lough, Commodity Economics Division.]

Economic Trends

Item	Unit or Base Period	1967	1974 Year	1974 Aug.	1974 June	1975 July	1975 Aug.
Prices:							
Prices received by farmers	1967=100	—	184	185	182	187	187
Crops	1967=100	—	214	220	192	199	201
Livestock and products	1967=100	—	164	161	176	180	179
Prices paid, interest, taxes and wage rates	1967=100	—	169	173	185	186	187
Family living items	1967=100	—	161	164	176	178	179
Production items	1967=100	—	172	179	190	190	192
Ratio [1]	1967=100	—	109	107	98	101	100
Wholesale prices, all commodities	1967=100	—	160.1	167.4	173.7	175.7	176.7
Industrial commodities	1967=100	—	153.8	161.6	170.7	171.2	172.2
Farm products	1967=100	—	187.7	189.2	186.2	193.7	193.2
Processed foods and feeds	1967=100	—	170.9	179.7	179.7	184.6	186.3
Consumer price index, all items	1967=100	—	147.7	149.9	160.6	162.3	162.8
Food	1967=100	—	161.7	162.8	174.4	178.6	178.1
Farm Food Market Basket: [2]							
Retail cost	1967=100	—	161.9	162.0	172.9	178.8	177.6
Farm value	1967=100	—	177.6	180.1	190.4	200.3	197.4
Farm-retail spread	1967=100	—	152.0	150.5	161.8	165.2	165.0
Farmers' share of retail cost	Percent	—	43	43	43	43	43
Farm Income: [3]							
Volume of farm marketings	1967=100	—	111	108	96	117	110
Cash receipts from farm marketings	Million dollars	42,817	93,521	7,444	6,284	7,913	7,400
Crops	Million dollars	18,434	52,097	4,020	2,674	4,211	3,700
Livestock and products	Million dollars	24,383	41,424	3,424	3,610	3,702	3,700
Realized gross income [4]	Billion dollars	49.9	101.1	—	96.1	—	—
Farm production expenses [4]	Billion dollars	38.3	73.4	—	75.6	—	—
Realized net income [4]	Billion dollars	11.6	27.7	—	20.5	—	—
Agricultural Trade:							
Agricultural exports	Million dollars	—	21,994	1,478	1,390	1,532	1,601
Agricultural imports	Million dollars	—	10,247	854	827	762	688
Land Values:							
Average value per acre	Dollars	[5] 168	[7] 339	—	—	—	[8] 354
Total value of farm real estate	Billion dollars	[5] 181.9	[7] 335	—	—	—	[8] 370
Gross National Product: [4]	Billion dollars	793.9	1,397.4	—	1,440.9	—	—
Consumption	Billion dollars	492.1	876.7	—	938.6	—	—
Investment	Billion dollars	116.6	209.4	—	148.1	—	—
Government expenditures	Billion dollars	180.1	309.2	—	338.1	—	—
Net exports	Billion dollars	5.2	2.1	—	16.2	—	—
Income and Spending: [5]							
Personal income, annual rate	Billion dollars	629.3	1,150.5	1,167.2	1,244.1	1,238.9	1,256.9
Total retail sales, monthly rate	Million dollars	26,151	44,815	47,056	48,779	49,655	49,827
Retail sales of food group, monthly rate	Million dollars	5,759	9,980	10,261	11,023	11,282	11,086
Employment and Wages: [9]							
Total civilian employment	Millions	74.4	[9] 85.9	[9] 86.3	[9] 84.4	[9] 85.1	[9] 85.4
Agricultural	Millions	3.8	[9] 3.5	[9] 3.5	[9] 3.3	[9] 3.4	3.5
Rate of unemployment	Percent	3.8	5.6	5.4	8.6	8.4	8.4
Workweek in manufacturing	Hours	40.6	40.0	40.1	39.3	39.4	39.6
Hourly earnings in manufacturing, unadjusted	Dollars	2.83	4.41	4.49	4.78	4.81	4.82
Industrial Production: [6]	1967=100	—	125	125	110	112	114
Manufacturers' Shipments and Inventories: [6]							
Total shipments, monthly rate	Million dollars	46,449	81,723	85,481	80,740	82,902	85,103
Total inventories, book value end of month	Million dollars	84,655	150,404	39,727	148,059	147,189	146,342
Total new orders, monthly rate	Million dollars	46,763	83,297	90,114	80,237	83,550	85,471

[1] Ratio of index of prices received by farmers to index of prices paid, interest, taxes, and farm wage rates. [2] Average annual quantities of farm food products purchased by urban wage earner and clerical worker households (including those of single workers living alone) in 1959-61—estimated monthly. [3] Annual and quarterly data on 50-State basis. [4] Annual rates seasonally adjusted second quarter. [5] Seasonally adjusted. [6] As of March 1, 1967. [7] As of Nov. 1, 1974. [8] As of March 1, 1975. [9] Beginning January 1972 data not strictly comparable with prior data because of adjustment to 1970 Census.

Sources: U.S. Dept. of Agriculture (Farm Income Situation, Marketing and Transportation Situation, Agricultural Prices, Foreign Agricultural Trade and Farm Real Estate Market Developments); U.S. Dept. of Commerce (Current Industrial Reports, Business News Reports, Monthly Retail Trade Report and Survey of Current Business); and U.S. Dept. of Labor (The Labor Force and Wholesale and Consumer Price Index).

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